

AMENDMENTS TO THE CLAIMS

1 - 71. (Canceled).

72. (New) A composite material comprised of a plurality of electrical excitation zone-treated, adhesive coated beads having average diameters between about 1 and about 10 mm and of which at least 50 percent are at least 50 percent coated with an adhesive and wherein a cured form of said adhesive has a hardness ranging from about Shore A 60 to about Shore A 95 and is used in a quantity such that it represents between about 20 and about 80 weight percent of the composite material and thereby serving to create a system of void spaces between the adhesive coated beads that constitutes from about 10 to about 40 volume percent the total volume of said composite material, and wherein the composite material exhibits an acceleration peak (g) value in the range of from about 83 to about 493.

73. The composite material of claim 72 wherein the adhesive coated beads have average diameters between about 1 and about 4 mm.

74. The composite material of claim 72 wherein said beads are inelastic.

75. The composite material of claim 72 wherein said beads are elastic.

76. The composite material of claim 72 wherein said beads are made of polymeric materials selected from the group consisting of polyethylene, propylene and ethyl propylene copolymer.

77. The composite material of claim 72 wherein said system of void spaces is substantially comprised of substantially regularly distributed void spaces.

78. The composite material of claim 72 wherein the beads have diameters ranging from about 1 mm to about 4 mm.

79. The composite material of claim 72 wherein said beads are solid.

80. The composite material of claim 72 wherein said beads are hollow.

81. The composite material of claim 72 wherein said beads are made of a ceramic material.

82. The composite material of claim 72 wherein said beads are made from a glass material.

83. The composite material of claim 72 wherein said beads are made of a plastic material.

84. The composite material of claim 72 wherein the beads have one or more holes passing through their bodies.

85. The composite material of claim 72 wherein said beads are made of a thermosetting material.

86. The composite material of claim 72 wherein said beads are made of a thermoplastic material.

87. The composite material of claim 72 wherein the adhesive is made from a two part resin.

88. The composite material of claim 72 wherein the adhesive is made from a thermosetting synthetic resin.

89. The composite material of claim 72 wherein the adhesive is made from a thermoplastic synthetic material.

90. The composite material of claim 72 wherein said beads are of different sizes.

91. The composite material of claim 72 wherein said beads are comprised of a mixture of different kinds of beads.

92. The composite material of claim 72 wherein said beads are coated with a coupling agent to promote bead/adhesive bonding.

93. The composite material of claim 72 wherein said beads are electrical excitation zone-treated more than once to accomplish more than one kind of treatment.

94. The composite material of claim 72 wherein said beads are coated with a polymeric material by the action of an electrical excitation zone treatment.

95. The composite material of claim 72 wherein said beads are spherical.

96. The composite material of claim 72 wherein said beads are ellipsoid.

97. The composite material of claim 72 wherein said beads are made of different polymeric materials.

98. The composite material of claim 72 wherein said material is placed in a cloth-like casing.

99. The composite material of claim 72 wherein said material is placed in a net-like casing.

100. The composite material of claim 72 wherein said material is used in conjunction with a hard plastic, outer shell.

101. The composite material of claim 72 wherein at least 50 percent of the beads are at least 80 percent covered by the adhesive.